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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/981,654	01/08/1998	YASUSHI KANEKO	971480	8315

23850 7590 11/19/2001

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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER


2871

DATE MAILED: 11/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 08/981,654	Applicant(s) Kaneko et al.
Examiner Dung Nguyen	Art Unit 2871



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 4, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

Art Unit: 2871

Response to Arguments

Applicant's argument filed on 09/04/2001 has been received and entered.

Applicant's argument with respect to claims 1 and 3, in view of the English translation dated 09/04/2001, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amstutz et al., US Patent No. 4,634,229 , in view of Natsunaga, US Patent No. 5,548,423.

Regarding claim 1, Amstutz et al., figure 1, disclose a liquid crystal display (LCD) apparatus having:

- A pair of transparent substrates (1, 2), each having parallel strips of electrode layers (6, 7);
- A super twist nematic liquid crystal (5) is sandwiched between the pair of substrates (1, 2), wherein the total twisted angle (ϕ) of liquid crystal molecules is between 180° and 360° ;
- A pair of polarizers (10, 11) is disposed to the outside of the pair of substrates (1, 2), wherein the polarizers having absorption axes which are inherently orthogonal to each other and the absorption axes inherently being angled 45° respect to a direction of the orientation of liquid

Art Unit: 2871

crystal molecules in an intermediate portion in a direction of thickness of the liquid crystal layer (i.e., $\phi = 190^\circ$, $\beta = 40^\circ$, $\gamma = 40^\circ$ and $\beta + \gamma = 90^\circ$).

Amstutz et al. do not disclose the LCD can be driven by applying a voltage of 10 to 20V. However, Natsunaga does disclose that drive region can be in the range of V_L (3 to 5V) to V_M (30 to 40V) (figure 9). Therefore, such disclosed range in Natsunaga makes possible the claimed range of 10V to 20V overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Regarding claim 3, although Amstutz et al. do not disclose the value of $\Delta n.d$ that lies within a range of 600 to 900nm, Amstutz et al. do disclose the range of 800 to 1200nm for the $\Delta n.d$ (claim 6). Therefore, such disclosed range in Amstutz et al. makes possible the claimed range of 600 to 900nm and overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakano et al. (US 3,956,169) disclose the driving voltage being in the range of 8V-20V (see figure 3).

Shioji et al. (JP 62-150330) disclose a liquid crystal shutter is driven by 15V.

Art Unit: 2871

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dung Nguyen whose telephone number is (703) 305-0423. The fax phone number for this Group is (703) 308-7722.

Any information of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.

DN
11/13/2001



William L. Sikes
Supervisory Patent Examiner
Group 2871